WESTON Analytics Use Only

9207L975

BOL: 2509869087 SFC: W92-0-0399-47 Insr #: 92-128

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client: Westinghouse Hanford Co.
Est. Final Proj. Sampling Date:
Work Order #: 6168-02-01-0000
Project Contact/Phone #: P.H. Butcher (509) 376-5045
AD Project Manager: Jessie King
QC: CLP Del: CLP TAT: 35 Day
Date Rec'd: 7-11-92 Date Due: 8-15-92
Account #: WS-HANFORD

Refrigerator #: SEE SPECIAL INSTRUCTIONS.
#/Type Container: Liquid / Solid
Volume: Liquid / Solid — SEE SPECIAL INSTRUCTIONS. See Below
Preservatives: SEE SPECIAL INSTRUCTIONS.

ANALYSES REQUESTED →

ORGANIC							INORG						
VOA	BNA	Pest/PCB	Herb	Anions	TSS TDS	Lead Sulfur	Metal	CN	TOC	TOX			Dis.

MATRIX CODES:
SL - Soil
SE - Sediment
SO - Solid
SU - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	1 Oil/H	2 Oil/SK	2 Oil/H		Anions	4	5	3 Mn/SO4		6 TOC	7 TOX	8 TSS/S	Mn/SO4
001	B06PW9			W	7-9-92	0820	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
002	B06PX0																		
003	B06PX1						✓												
	Anions = ICCL, ICFL, ICSO4, ICPO4, ICNO2, ICNO3																		

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

DATE/REVISIONS: RAD INFO TO FOLLOW

Special Instructions: 1) 3, 40mL, aG: CLP-VOA. 2) 3, 2L, aG: SEMI-VOA, PCB/PEST. 3) 1, 1L, P; ICP/AA-METAL, Hg (HNO3) UNFILTERED. 4) 3, 1L, P; TDS, ~~BOD, DISSOLVED OXYGEN~~, ANIONS, TSS, ALK. 5) ~~1, 1L, P; AMMONIA, COD (H2SO4).~~ 6) 1, 250mL, aG TOC ~~(INCLUDES BICARBONATE/CARBONATE)~~ (H2SO4). 7) 1, 250mL, Gs; TOX (H2SO4). 8) 1, 1L, P; GROSS ALPHA/BETA, GAMMA SCAN (HNO3). 9) 1, 1L, P; ICP/AA METALS, Hg ~~(HNO3) (FILTERED).~~

1. 2. 3. 4. 5. 6.

(1) MS/MSD Required

Relinquished by	Received by	Date	Time
[signature]	[signature]	7-11-92	12:30
	[signature] 7-11-92		

Relinquished by	Received by	Date	Time
	[signature] 7-11-92		

WESTON Analytics Use Only

Samples were: 1) Shipped ✓ or Hand Delivered ___ Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was: 1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES: Anions out

RECEIVED EMAC FEB 1 1993

RFW 21-21-001/A-7/91 ___ L372 ___ L373 ___ L375 ___ L377 ___ L378 Ref# N/A Cooler# ORB-2 381-596a

0044594

0000003 92074975

Westinghouse Hanford Company

CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 200AAMS

Collection Date 7/9/92

Ice Chest No. ORG-2

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 2509860909-7

Offsite Property No. W92-0-0399-47

Method of Shipment EMERY

Shipped to WESTON

Possible Sample Hazards/Remarks N/A

Sample Identification

B06fw9

3, 40ml, aG, WATER, CLP-VOA
3, 2L, aG, WATER, SEMI-VOA, PCB/PEST
1, 1L, P, WATER; ICP/AA-METAL & Hg (HNO3) UNFILTERED
3, 1L, P, WATER, TDS, ~~BOD, DISOLVED OXYGEN,~~ ANIONS, TSS, ALK
1, 1L, P, WATER, AMMONIA, COD (H2SO4) [illegible] 6/15/92
1, 250ml, aG, WATER, TOC(INCLUDES BICARBONATE/CARBONATE (H2SO4)
1, 250ml, Gs, WATER, TOX (H2SO4)
1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)

B06f[illegible]

1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)

B06f[illegible]

3, 40 ml, WATER, CLP-VOA

[] Field Transfer of Custody	Chain of Possession	(Sign and Print Names)
Relinquished by: [illegible]	Received by: K. Tran / K. [illegible]	Date/Time: 7/10/92 0914
Relinquished by: K. Tran / K. [illegible]	Received by:	Date/Time:
Relinquished by: Emery	Received by: [illegible]	Date/Time: 7-11-92 12:30
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

0000005 92074975

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Designation/Sampling Locations 200AAMS

Collection Date 7/9/92

Ice Chest No. ORG-2

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 250986908-7

Offsite Property No. W92-0-0399-47

Method of Shipment EMERY

Shipped to WESTON

Possible Sample Hazards/Remarks N/A

Sample Identification

B06FW4

3, 40ml, aG, WATER, CLP-VOA
3, 2L, aG, WATER, SEMI-VOA, PCB/PEST
1, 1L, P, WATER, ICP/AA-METAL & Hg (HNO3) UNFILTERED
3, 1L, P, WATER, TDS, ~~BOD, DISOLVED OXYGEN,~~ ANIONS, TSS, ALK
1, 1L, P, WATER, AMMONIA, COD (H2SO4) [illegible] 6/15/92
1, 250ml, aG, WATER, TOC(INCLUDES BICARBONATE/CARBONATE (H2SO4)
1, 250ml, Gs, WATER, TOX (H2SO4)
1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)

B06FX0

1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)

B06FX1

3, 40 ml, WATER, CLP-VOA

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C. Celiberti C. Celiberti	K. Trapp / K. Trapp	7/12/92 0914
K. Trapp / K. Trapp		
Emery	[illegible]	7-11-92 12:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

Roy F. Weston, Inc. - Lionville Laboratory
Volatiles by GC/MS, HSL List

RFW Batch Number: 9207L975 Client: WESTINGHOUSE HANFORD Work Order: 6168-02-01-0000 Report Date: 08/12/92 15:49 Page: 1a

	Cust ID:	B06PW9		B06PW9		B06PW9		B06PX1		VBLK		VBLK BS	
Sample Information	RFW#:	001		001 MS		001 MSD		003		92LVB121-MB1		92LVB121-MB1	
	Matrix:	WATER		WATER		WATER		WATER		WATER		WATER	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L		ug/L		ug/L	
Surrogate Recovery	Toluene-d8	100	%	99	%	99	%	100	%	99	%	99	%
	Bromofluorobenzene	96	%	92	%	96	%	95	%	96	%	94	%
	1,2-Dichloroethane-d4	99	%	95	%	99	%	96	%	99	%	95	%
			fl		fl		fl		fl		fl		fl
Chloromethane		10	U	10	U	10	U	10	U	10	U	10	U
Bromomethane		10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride		10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane		10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride		7	B	13	B	13	B	17	B	4	J	14	B
Acetone		8	JB	12	B	7	JB	15	B	4	J	18	B
Carbon Disulfide		5	U	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene		5	U	79	%	78	%	5	U	5	U	81	%
1,1-Dichloroethane		5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)		5	U	5	U	5	U	5	U	5	U	5	U
Chloroform		5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane		5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone		10	U	10	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane		5	U	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride		5	U	5	U	5	U	5	U	5	U	5	U
Vinyl Acetate		10	U	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane		5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane		5	U	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene		5	U	5	U	5	U	5	U	5	U	5	U
Trichloroethene		5	U	103	%	103	%	5	U	5	U	102	%
Dibromochloromethane		5	U	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane		5	U	5	U	5	U	5	U	5	U	5	U
Benzene		5	U	91	%	94	%	5	U	5	U	95	%
Trans-1,3-Dichloropropene		5	U	5	U	5	U	5	U	5	U	5	U
Bromoform		5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone		10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone		10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene		5	U	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane		5	U	5	U	5	U	5	U	5	U	5	U

*= Outside of EPA CLP QC limits.

400007

Cust ID:	BO6PW9	BO6PW9	BO6PW9	BO6PX1	VBLK	VBLK BS
RFW#:	001	001 MS	001 MSD	003	92LVB121-MB1	92LVB121-MB1
Toluene	5 U	97 %	98 %	5 U	5 U	101 %
Chlorobenzene	5 U	96 %	98 %	5 U	5 U	100 %
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

000008

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD **SAMPLES RECEIVED:** 07-11-92
RFW #: 9207L975, GC/MS VOLATILE
W.O. #: 6168-02-01

NARRATIVE

The set of samples consisted of two (2) water samples collected on 07-09-92.

The samples were analyzed according to criteria set forth in CLP SOW 2/88 (Rev. 5/89) for TCL volatiles target compounds on 07-14-92.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Non-target compounds were not detected in these samples.

2. All surrogate recoveries were within EPA QC limits.

3. All blank spike recoveries were within EPA QC limits.

4. All matrix spike recoveries were within EPA QC limits.

5. The laboratory blank contained the common contaminants Methylene Chloride and Acetone at levels less than the CRQL.

6. All internal standard and retention time criteria were met.

Margaret M. Leahy for 8/13/92
Jack R. Tuschall, Ph.D. Date
Laboratory Manager
Lionville Analytical Laboratory

drm/07-975v.cn

1A
VOLATILE ORGANICS ANALYSIS SHEET 0000022

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9207L975-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: B071409

Level: (low/med) LOW Date Received: 07/11/92

% Moisture: not dec. _____ Date Analyzed: 07/14/92

Column: (pack/cap) CAP Dilution Factor: 1.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	B
67-64-1	Acetone	8	JB
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E

VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-001

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: B071409

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____

Date Analyzed: 07/14/92

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1A
VOLATILE ORGANICS ANALYSIS SHEET 0000030

CLIENT SAMPLE NO.

B06PX1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-003

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: B071410

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____

Date Analyzed: 07/14/92

Column: (pack/cap) CAP

Dilution Factor: 1.00

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	17	B
67-64-1	Acetone	15	B
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E

0000031

VOLATILE ORGANICS ANALYSIS SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B06PX1

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-003

Sample wt/vol: 5.00 (g/mL) ML

Lab File ID: B071410

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____

Date Analyzed: 07/14/92

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

WESTON Analytics Use Only: 9207L975

DOC: 2509869087 WO: W92-0-0399-47 Insp #: 92-128

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client: Westinghouse Hanford Co.
Est. Final Proj. Sampling Date:
Work Order #: 6168-02-01-0000
Project Contact/Phone #: P.H. Butcher (509) 376-5045
AD Project Manager: Jamie King
QC: CLP Del: CLP TAT: 35 Day
Date Rec'd: 7-11-92 Date Due: 8-15-92
Account #: WS-HANFORD

Refrigerator #: SEE SPECIAL INSTRUCTIONS.
#/Type Container: Liquid / Solid: SEE SPECIAL INSTRUCTIONS. See Below
Volume: Liquid / Solid:
Preservatives: SEE SPECIAL INSTRUCTIONS.

ANALYSES REQUESTED →

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	ORGANIC VOA	BNA	Pest/PCB	Herb	Anions	SS Alpha	Rad Pulse	INORG Metal	CN	TOC	TOX				Dis. Rad
								WESTON Analytics Use Only														
								1 060418	2 060524	3 060824		4	5		3 MS/MSD		6 IOCT	7 ITOX		8 IGAB		MS/MSD
S - Soil, SE - Sediment, SO - Solid, SL - Sludge, W - Water, O - Oil, A - Air, DS - Drum Solids, DL - Drum Liquids, L - EP/TCLP Leachate, WI - Wipe, X - Other, F - Fish	001	B06PW9			W	7-9-92	0820	✓	✓	✓		✓	✓	✓	✓		✓	✓		✓		
	002	B06PX0			↓	↓	↓															✓
	003	B06PX1						✓														
		Anions = ICCl, ICFl, ICSO4, ICPO4, ICNO2, ICNO3																				

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

DATE/REVISIONS: RAD INFO TO FOLLOW

Special Instructions: 1) 3, 40mL, aG; CLP-VOA. 2) 3, 2L, aG; SEMI-VOA, PCB/PEST. 3) 1, 1L, P; ICP/AA-METAL, Hg (HNO3) UNFILTERED. 4) 3, 1L, P; TDS, ~~BOD, DISSOLVED OXYGEN,~~ KT 7/8/92 ANIONS, TSS, ALK. 5) ~~1, 1L, P; AMMONIA, COD (H2SO4).~~ 6) 1, 250mL, aG; TOC ~~(INCLUDES BICARBONATE/CARBONATE)~~ KT 7/8/92 (H2SO4). 7) 1, 250mL, Gs; TOX (H2SO4). 8) 1, 1L, P; GROSS ALPHA/BETA, GAMMA SCAN (HNO3). 9) 1, 1L, P; ICP/AA METALS, Hg (HNO3) (FILTERED).

1. 2. 3. 4. 5. 6.

(1) MS/MSD Required

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	7-11-92	12:30
[illegible]			

Relinquished by	Received by	Date	Time
	[illegible]	7-11-92	

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

WESTON Analytics Use Only

Samples were: 1) Shipped ✓ or Hand Delivered ___ Airbill # ___
2) Ambient or Chilled
3) Received In Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was: 1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

Anions out

RFW 21-21-001/A-7/91 ___ L372 ___ L373 ___ L375 ___ L377 ___ L378 Ref# N/A Cooler# ARG-2 381-596a

0000003 9207L975

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator PH BUTCHER

Company Contact PH BUTCHER

Telephone (509)376-5045

Project Desi..ation/Sampling Locations 200AAMS

Collection Date 7/9/92

Ice Chest No. ORG-2

Field Logbook No. EFL-1033

Bill of Lading/Airbill No. 250986908-7

Offsite Property No. W92-0-0399-47

Method of Shipment EMERY

Shipped to WESTON

Possible Sample Hazards/Remarks N/A

Sample Identification

B06FW9

3, 40ml, aG, WATER, CLP-VOA
3, 2L, aG, WATER, SEMI-VOA, PCB/PEST
1, 1L, P, WATER, ICP/AA-METAL & Hg (HNO3) UNFILTERED
3, 1L, P, WATER, TDS, ~~BOD, DISOLVED OXYGEN,~~ ANIONS, TSS, ALK
1, 1L, P, WATER, AMMONIA, COD (H2SO4) 6/15/92
1, 250ml, aG, WATER, TOC(INCLUDES BICARBONATE/CARBONATE (H2SO4)
1, 250ml, Gs, WATER, TOX (H2SO4)
1, 1L, P, WATER, GROSS ALPHA/BETA, GAMMA SCAN (HNO3)

B06FX0

1, 1L, P, WATER, ICP/AA METAL & Hg (HNO3) (FILTERED)

B06FX1

3, 40 ml, WATER, CLP-VOA

[] Field Transfer of Custody — Chain of Possession — (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
C. Cilibert / C. Celiberti	K. Trapp / K. Trapp	7/10/92 0914
K. Trapp / K. Trapp		
Emery	[signature]	7-11-92 12:30

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

A-6000-407 (12/90) (EF) WEF061
Chain of Custody

Roy F. Weston, Inc. - Lionville Laboratory
Semivolatiles by GC/MS, HSL List

RFW Batch Number: 9207L975 Client: WESTINGHOUSE HANFORD Work Order: 6168-02-01-0000 Report Date: 03/14/92 18:06 Page: 1a

	Cust ID:	BO6PW9	BO6PW9	BO6PW9	SBLK	SBLK BS
Sample Information	RFW#:	001	001 MS	001 MSD	92LE1068-MB1	92LE1068-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L
Surrogate Recovery	Nitrobenzene-d5	71 %	76 %	69 %	68 %	85 %
	2-Fluorobiphenyl	78 %	91 %	80 %	77 %	110 %
	p-Terphenyl-d14	91 %	95 %	107 %	103 %	111 %
	Phenol-d5	80 %	78 %	75 %	76 %	89 %
	2-Fluorophenol	67 %	68 %	65 %	66 %	72 %
	2,4,6-Tribromophenol	63 %	76 %	76 %	93 %	71 %
		fl	fl	fl	fl	fl fl
Phenol		10 U	84 %	80 %	10 U	95 * %
bis(2-Chloroethyl)ether		10 U	10 U	10 U	10 U	10 U
2-Chlorophenol		10 U	66 %	64 %	10 U	72 %
1,3-Dichlorobenzene		10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene		10 U	64 %	55 %	10 U	70 %
Benzyl alcohol		10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene		10 U	10 U	10 U	10 U	10 U
2-Methylphenol		10 U	10 U	10 U	10 U	10 U
bis(2-Chloroisopropyl)ether		10 U	10 U	10 U	10 U	10 U
4-Methylphenol		10 U	10 U	10 U	10 U	10 U
N-Nitroso-Di-n-propylamine		10 U	72 %	65 %	10 U	86 %
Hexachloroethane		10 U	10 U	10 U	10 U	10 U
Nitrobenzene		10 U	10 U	10 U	10 U	10 U
Isophorone		10 U	10 U	10 U	10 U	10 U
2-Nitrophenol		10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol		10 U	10 U	10 U	10 U	10 U
Benzoic acid		50 U	50 U	50 U	50 U	50 U
bis(2-Chloroethoxy)methane		10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol		10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene		10 U	61 %	56 %	10 U	66 %
Naphthalene		10 U	10 U	10 U	10 U	10 U
4-Chloroaniline		10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene		10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol		10 U	81 %	82 %	10 U	86 %
2-Methylnaphthalene		10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene		10 U	10 U	10 U	10 U	10 U

*= Outside of EPA CLP QC limits.

000006

Cust ID:	BO6PW9		BO6PW9		BO6PW9		SBLK		SBLK BS	
RFW#:	001		001 MS		001 MSD		92LE1068-MB1		92LE1068-MB1	
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	50	U	50	U	50	U	50	U	50	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	50	U	50	U	50	U	50	U	50	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	50	U	50	U	50	U	50	U	50	U
Acenaphthene	10	U	86	%	84	%	10	U	100	%
2,4-Dinitrophenol	50	U	50	U	50	U	50	U	50	U
4-Nitrophenol	50	U	105 *	%	95 *	%	50	U	83 *	%
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	118 *	%	114 *	%	10	U	114 *	%
Diethylphthalate	10	U	10	U	2	JB	2	J	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	50	U	50	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol	50	U	50	U	50	U	50	U	50	U
N-Nitrosodiphenylamine (1)	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	50	U	79	%	79	%	50	U	79	%
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	4	JB	3	JB	4	JB	6	J	3	JB
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	128 *	%	130 *	%	10	U	147 *	%
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	20	U	20	U	20	U	20	U	20	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	36	B	4	JB	11	B	31		11	B
Di-n-Octyl phthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

000007

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD **SAMPLES RECEIVED:** 07-11-92
RFW #: 9207L975, SEMIVOLATILE
W.O. #: 6168-02-01

NARRATIVE

One (1) water sample was collected on 07-09-92.

The sample and its associated QC samples were extracted on 07-14-92 and analyzed according to criteria set forth in CLP SOW 02/88 (Rev. 05/89) for TCL Semivolatile target compounds on 08-07-92.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Non-target compounds were detected in these samples.

2. All surrogate recoveries were within EPA QC limits.

3. Six (6) of twenty-two (22) matrix spike recoveries were outside EPA QC limits.

4. Four (4) of eleven (11) blank spike recoveries were outside EPA QC limits.

5. The laboratory blank 92LE1068-MB1 contained the common contaminants Diethylphthalate and Di-n-butylphthalate at a level less than the CRQL and Bis(2-ethylhexyl)phthalate at a level less than 4X the CRQL.

6. All internal standard area and retention time criteria were met.

08.25.92
Date

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

kls/07-975b.cn

1B 000022

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER Lab Sample ID: 9207L9[illegible]-001

Sample wt/vol: 990 (g/mL) ML Lab File ID: M080708

Level: (low/med) LOW Date Received: 07/11/92

% Moisture: not dec. _____ dec. Date Extracted: 07/14/92

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 08/07/92

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

000023

SEMIVOLATILE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-001

Sample wt/vol: 990 (g/mL) ML

Lab File ID: M080708

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____ dec.

Date Extracted: 07/14/92

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/07/92

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	4	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	36	B
117-84-0	Di-n-Octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS SHEET 000024
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-001

Sample wt/vol: 990 (g/mL) ML

Lab File ID: M080708

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____ dec.

Date Extracted: 07/14/92

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/07/92

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	CYCLOHEXENONE	5.85	3	JB
2.	UNKNOWN	6.20	3	JB
3.	ADIPATE	21.85	7	JB
4.	UNKNOWN	22.43	4	JB
5.	UNKNOWN	22.60	4	JB
6.	UNKNOWN	24.52	50	JB

Roy F. Weston, Inc. - Lionville Laboratory
Pesticide/PCBs by GC, CLP List

RFW Batch Number: 9207L975 | Client: WESTINGHOUSE HANFORD | Work Order: 6168-02-01-0000 | Report Date: 09/03/92 11:39 | Page: 1

	Cust ID:	BO6PW9		BO6PW9		BO6PW9		PBLK	
Sample Information	RFW#:	001		001 MS		001 MSD		92LE1071-MB1	
	Matrix:	WATER		WATER		WATER		WATER	
	D.F.:	1.00		2.00		2.00		1.00	
	Units:	ug/L		ug/L		ug/L		ug/L	
Surrogate: Di-n-butylchlorendate		114	%	114	%	125	%	138	%
Alpha-BHC		0.050	U	0.20	U	0.20	U	0.050	U
Beta-BHC		0.050	U	0.20	U	0.20	U	0.050	U
Delta-BHC		0.050	U	0.20	U	0.20	U	0.050	U
gamma-BHC (Lindane)		0.050	U	65	%	60	%	0.050	U
Heptachlor		0.050	U	65	%	65	%	0.050	U
Aldrin		0.050	U	60	%	60	%	0.050	U
Heptachlor epoxide		0.050	U	0.20	U	0.20	U	0.050	U
Endosulfan I		0.050	U	0.20	U	0.20	U	0.050	U
Dieldrin		0.10	U	74	%	74	%	0.10	U
4,4'-DDE		0.10	U	0.40	U	0.40	U	0.10	U
Endrin		0.10	U	94	%	90	%	0.10	U
Endosulfan II		0.10	U	0.40	U	0.40	U	0.10	U
4,4'-DDD		0.10	U	0.40	U	0.40	U	0.10	U
Endosulfan sulfate		0.10	U	0.40	U	0.40	U	0.10	U
4,4'-DDT		0.10	U	60	%	56	%	0.10	U
Methoxychlor		0.50	U	2.0	U	2.0	U	0.50	U
Endrin ketone		0.10	U	0.40	U	0.40	U	0.10	U
alpha-Chlordane		0.50	U	2.0	U	2.0	U	0.50	U
gamma-Chlordane		0.50	U	2.0	U	2.0	U	0.50	U
Toxaphene		1.0	U	4.0	U	4.0	U	1.0	U
Aroclor-1016		0.50	U	2.0	U	2.0	U	0.50	U
Aroclor-1221		0.50	U	2.0	U	2.0	U	0.50	U
Aroclor-1232		0.50	U	2.0	U	2.0	U	0.50	U
Aroclor-1242		0.50	U	2.0	U	2.0	U	0.50	U
Aroclor-1248		0.50	U	2.0	U	2.0	U	0.50	U
Aroclor-1254		1.0	U	4.0	U	4.0	U	1.0	U
Aroclor-1260		1.0	U	4.0	U	4.0	U	1.0	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

000507

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD **SAMPLE(S) RECEIVED:** 07-11-92
RFW #: 9207L975, PEST/PCB
W.O. #: 6168-02-01

NARRATIVE

One (1) water sample was collected on 07-09-92.

The sample and its associated QC samples were extracted on 07-14-92 and analyzed according to criteria set forth in the Contract Laboratory Program for Pesticide and PCB target compounds on 08-06,07-92.

A modification to the Contract Laboratory Program 02/88 was initiated to include surrogate requirements from Method SW 846. Tetrachloro-m-xylene (TCX) is an early eluting compound which is an additional surrogate added to sample extracts and will be reported when there is an interference with Di-n-butylchlorendate (DBC).

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. Linearity and breakdown criteria were met on the primary column.

2. For continuing calibration standards analyzed prior to the sample extracts, the 15%/20% criteria for calibration factors were exceeded for Endrin on 08-07-92 on the SP2250/2401 column at 0206 and on the SP2100 column at 0031.

   The data reflected an increase in instrument response for the target compound Endrin; therefore, the ability to identify or confirm this parameter was not impaired. Quantitation was not required; therefore, the data should not be impacted.

3. Retention time criteria were met for all compounds on both the primary and confirmation columns.

4. All surrogate recoveries were within EPA QC limits.

5. All matrix spike recoveries were within EPA QC limits.

WESTON
MANAGERS DESIGNERS CONSULTANTS

6. The laboratory blank spike was inadvertently not spiked during the extraction process; therefore, was not included with the data package.

7. The matrix spike samples required two-fold dilutions to maintain the pesticide concentrations within the linear range of the instrument.

09.11.92

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

Date

sma/pcb/07-975pp.cn

000015

1D

PESTICIDE ORGANICS ANALYSIS SHEET

CLIENT SAMPLE NO.

B06PW9

Lab Name: Roy F. Weston, Inc. Work Order: 6168-02-01-0000

Client: WESTINGHOUSE HANFORD

Matrix: WATER

Lab Sample ID: 9207L975-001

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: 08069203.25

Level: (low/med) LOW

Date Received: 07/11/92

% Moisture: not dec. _____ dec.

Date Extracted: 07/14/92

Extraction: (SepF/Cont/Sonc) CONT

Date Analyzed: 08/07/92

GPC Cleanup: (Y/N) N pH: 7.0

Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		
319-84-6	Alpha-BHC	0.050	U
319-85-7	Beta-BHC	0.050	U
319-86-8	Delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

DQR 9/2/92

Roy F. Weston, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD CO. **SAMPLES RECEIVED:** 07/11/92
RFW #: 9207L975
W.O. #: 6168-02-01

METALS NARRATIVE

The set of samples consisted of two (2) water samples collected on 07/09/92.

The samples were analyzed according to criteria set forth in CLP SOW 3/90.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analysis:

1. ICVs, CCVs, and LCSs stock standards were purchased from Inorganic Ventures Laboratory.

2. All ICV and CCV values were within control limits.

3. All ICB and CCB values were within control limits.

4. All preparation blank values were within control limits with the exception of lead on batch #92L1667-MB1 which was above the CRDL of 3.0 ug/L at 5.5 ug/L. There was no high bias to lead samples as all were below the CRDL.

5. All LCS results were within the 80-120% control limits.

6. All matrix spike recoveries were within the 75-125% control limit with the exceptions of chromium, iron and selenium. All exceptions are flagged with a "N" on the CLP forms.

7. All duplicate analyses were within the 20% RPD control limit.

8. The code CV is currently in use by the laboratory for both mercury instruments in operation (HG1 and HG2). HG1 is complete with autosampler and software, but still requires manual digestion; HG2 is operated by the analyst, produces a strip chart and also requires manual digestion.

WESTON
MANAGERS DESIGNERS CONSULTANTS

9. HG1 requires less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionally scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 ml. For soils, 0.1 gram of sample is taken to a final volume of 50 ml (including all reagents).

10. Quarterly Detection Limits, ICP Interelement Correction Factors and ICP Linear Ranges for IC3 are included in this package, but do not appear on EDD.

11. The graphite furnace time that appears on form XIV is the time of the first injection. The time that appears on the data is the print time.

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratories

08.27.92
Date

mlj\ clp-met.nar

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 08/25/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9207L975

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-001	B06PW9	Silver, Total	10.0	u	UG/L	10.0
		Aluminum, Total	200	u	UG/L	200
		Arsenic, Total	10.0	u	UG/L	10.0
		Barium, Total	200	u	UG/L	200
		Beryllium, Total	5.0	u	UG/L	5.0
		Calcium, Total	37500		UG/L	5000
		Cadmium, Total	5.0	u	UG/L	5.0
		Cobalt, Total	50.0	u	UG/L	50.0
		Chromium, Total	72.7		UG/L	10.0
		Copper, Total	25.0	u	UG/L	25.0
		Iron, Total	332		UG/L	100
		Mercury, Total	0.20	u	UG/L	0.20
		Potassium, Total	5000	u	UG/L	5000
		Magnesium, Total	13000		UG/L	5000
		Manganese, Total	15.0	u	UG/L	15.0
		Sodium, Total	14300		UG/L	5000
		Nickel, Total	40.0	u	UG/L	40.0
		Lead, Total	3.0	u	UG/L	3.0
		Antimony, Total	60.0	u	UG/L	60.0
		Selenium, Total	5.0	u	UG/L	5.0
		Thallium, Total	10.0	u	UG/L	10.0
		Vanadium, Total	50.0	u	UG/L	50.0
		Zinc, Total	20.0	u	UG/L	20.0

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 08/25/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9207L975

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT
-002	BO6PX0	Silver, Soluble	10.0	u	UG/L	10.0
		Aluminum, Soluble	200	u	UG/L	200
		Arsenic, Soluble	10.0	u	UG/L	10.0
		Barium, Soluble	200	u	UG/L	200
		Beryllium, Soluble	5.0	u	UG/L	5.0
		Calcium, Soluble	36700		UG/L	5000
		Cadmium, Soluble	5.0	u	UG/L	5.0
		Cobalt, Soluble	50.0	u	UG/L	50.0
		Chromium, Soluble	10.0	u	UG/L	10.0
		Copper, Soluble	25.0	u	UG/L	25.0
		Iron, Soluble	100	u	UG/L	100
		Mercury, Soluble	0.31		UG/L	0.20
		Potassium, Soluble	5000	u	UG/L	5000
		Magnesium, Soluble	12600		UG/L	5000
		Manganese, Soluble	15.0	u	UG/L	15.0
		Sodium, Soluble	13300		UG/L	5000
		Nickel, Soluble	40.0	u	UG/L	40.0
		Lead, Soluble	3.0	u	UG/L	3.0
		Antimony, Soluble	60.0	u	UG/L	60.0
		Selenium, Soluble	5.0	u	UG/L	5.0
		Thallium, Soluble	10.0	u	UG/L	10.0
		Vanadium, Soluble	50.0	u	UG/L	50.0
		Zinc, Soluble	20.0	u	UG/L	20.0

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PW9

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP975

Matrix (soil/water): WATER Lab Sample ID: 920797501

Level (low/med): LOW Date Received: 7/11/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	35.00	U		P
7440-36-0	Antimony	44.00	U		P
7440-38-2	Arsenic	2.00	U	W	F
7440-39-3	Barium	60.90	B		P
7440-41-7	Beryllium	1.20	B		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	37500.00			P
7440-47-3	Chromium	72.70		N	P
7440-48-4	Cobalt	6.00	U		P
7440-50-8	Copper	5.00	U		P
7439-89-6	Iron	332.00		N	P
7439-92-1	Lead	2.00	U	W	F
7439-95-4	Magnesium	13000.00			P
7439-96-5	Manganese	7.60	B		P
7439-97-6	Mercury	.10	U		CV
7440-02-0	Nickel	38.40	B		P
7440-09-7	Potassium	4130.00	B		P
7782-49-2	Selenium	2.90	B	WN	F
7440-22-4	Silver	6.00	U		P
7440-23-5	Sodium	14300.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	29.10	B		P
7440-66-6	Zinc	13.70	B		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

B06PX0

Lab Name: ROY F. WESTON, INC - L372 Contract: 6168-02-01

Lab Code: WESTON Case No.: WEST SAS No.: SDG No.: CLP975

Matrix (soil/water): WATER Lab Sample ID: 920797502

Level (low/med): LOW Date Received: 7/11/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	35.00	U		P
7440-36-0	Antimony	44.00	U		P
7440-38-2	Arsenic	2.40	B		F
7440-39-3	Barium	52.10	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	36700.00			P
7440-47-3	Chromium	8.00	U	N	P
7440-48-4	Cobalt	6.00	U		P
7440-50-8	Copper	5.00	U		P
7439-89-6	Iron	48.00	B	N	P
7439-92-1	Lead	2.00	U	W	F
7439-95-4	Magnesium	12600.00			P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	.31			CV
7440-02-0	Nickel	18.00	U		P
7440-09-7	Potassium	3300.00	B		P
7782-49-2	Selenium	2.00	U	WN	F
7440-22-4	Silver	6.00	U		P
7440-23-5	Sodium	13300.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	21.10	B		P
7440-66-6	Zinc	6.00	U		P
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

RECORD COPY

ROY F. WESTON, INC.
Lionville Laboratory

CLIENT: WESTINGHOUSE HANFORD **SAMPLE(S) RECEIVED:** 07-11-92
RFW #: 9207L975
W.O. #: 6168-02-01

INORGANIC NARRATIVE

The following is a summary of the quality control results and a description of any problems encountered during the analysis of this batch of samples:

1. Sample holding times as required by 40CFR136 were met with the exception of Nitrite by IC, Nitrate by IC and Phosphate by IC which were received past hold.

2. All preparation blank results were below the required detection limit.

3. All laboratory control standards (blank spikes) were within the control limits of 80-120%. All %RPD were within the 20% guidance limit.

4. All calibration verification checks were within the required control limits of 90-110%. Calibration verification is performed using independent standards.

5. Matrix spike recoveries are summarized on the Inorganic Accuracy Report contained within this document. All recoveries were within the 75-125% guidance limits. All %RPD were within the 20% guidance limit.

6. Replicate results are summarized on the Inorganic Precision Report contained within this document. All results were within the 20% RPD guidance limit.

7. The analytical methods applied by the laboratory, unless otherwise requested, for all inorganic analyses are derived from the USEPA Method for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020) and Standard Methods for the Examination of Water and Wastewater 16 ed. Methods for the analysis of solid samples are derived from Test Methods for Evaluating Solid Waste (USEPA SW846).

08.11.92
Date

Jack R. Tuschall, Ph.D.
Laboratory Manager
Lionville Analytical Laboratory

SEP 1992
RECEIVED
OSM DMO

pas/i07-975

ROY F. WESTON INC.

INORGANIC DATA SUMMARY REPORT 08/10/92

CLIENT: WESTINGHOUSE HANFORD
WORK ORDER: 6168-02-01-0000

WESTON BATCH #: 9207L975

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT
-001	BO6PW9	Alkalinity	135	MG/L	2.0
		Chloride by IC	9.0	MG/L	5.0
		Fluoride by IC	0.50 u	MG/L	0.50
		Nitrite by IC	0.25 u	MG/L	0.25
		Nitrate by IC	18.6	MG/L	5.0
		Chemical Oxygen Demand	5.0 u	MG/L	5.0
		Phosphate by IC	0.25 u	MG/L	0.25
		Sulfate by IC	21.6	MG/L	5.0
		Ammonia, as N	0.10 u	MG/L	0.10
		Total Organic Carbon	1.0	MG/L	0.50
		Total Dissolved Solids	236	MG/L	5.0
		Total Suspended Solids	5.0 u	MG/L	5.0